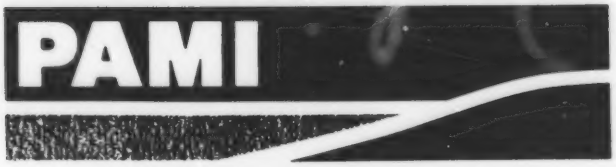
Thirteenth
Annual Report
1986 - 1987

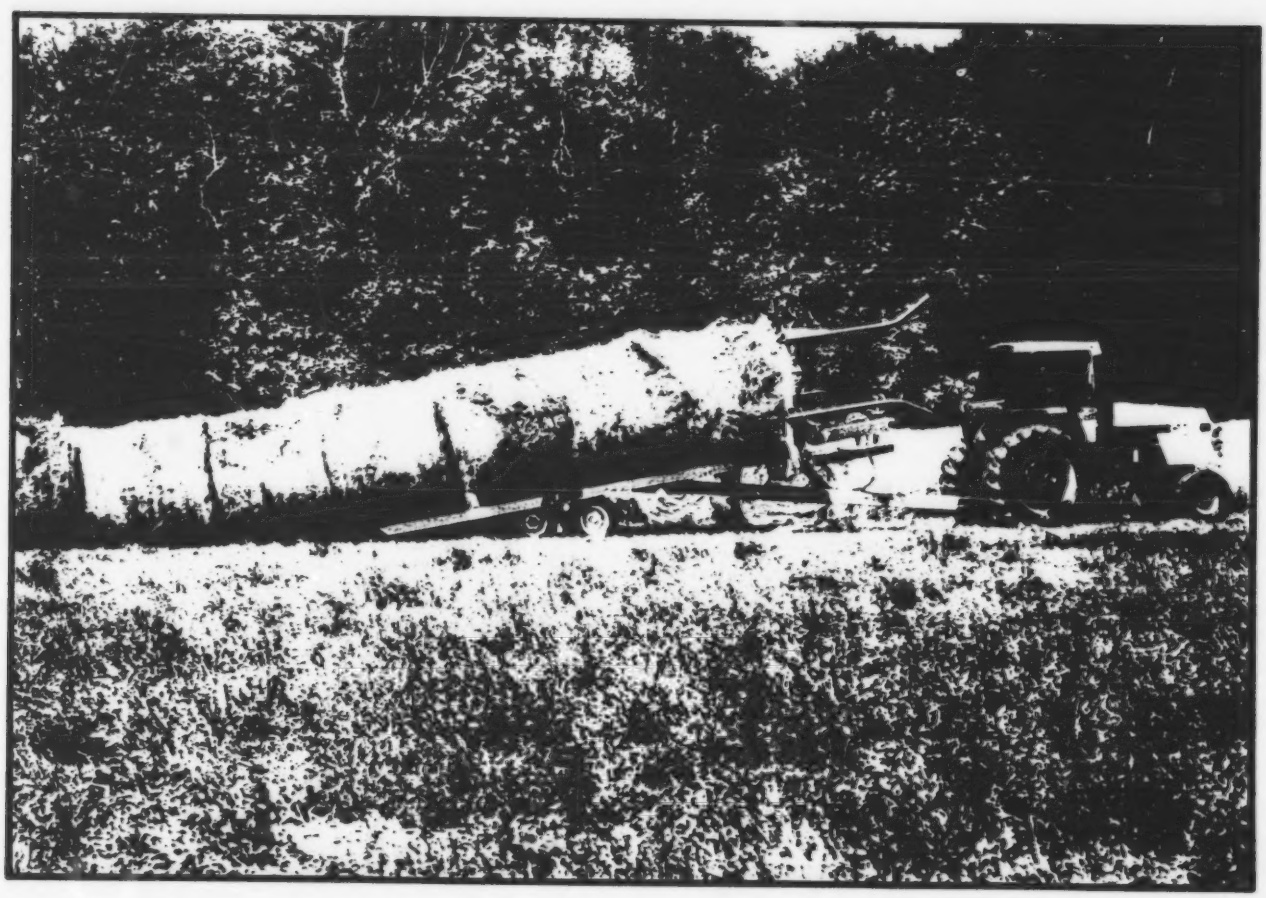


PRAIRIE AGRICULTURAL
MACHINERY INSTITUTE

THE PRAIRIE AGRICULTURAL MACHINERY INSTITUTE

"to improve the design and aid in the selection and use of agricultural machinery in the prairie provinces"

To achieve this goal, the provinces of Alberta, Manitoba and Saskatchewan established the Prairie Agricultural Machinery Institute as a unique resource to the farmers and agricultural machinery manufacturers of the prairies. Since its inception October 10, 1974, programs to provide for the evaluation and development of agricultural machines, for research into matters concerning agricultural machines and for the extension of information on agricultural machines have been the primary concern of the Machinery Institute.



Honourable
Grant Devine
Premier and Minister of
Agriculture
Province of Saskatchewan

Honourable
Peter Elzinga
Minister of Agriculture
Province of Alberta

Honourable
Bill Uruski
Minister of Agriculture
Province of Manitoba

MEMBERS OF COUNCIL

Name
CHAIRMAN
G. Nystuen
Spalding, Saskatchewan

COUNCILLORS
D. Green
Claresholm, Alberta

J. Enns
Oak Bluff, Manitoba

R.S. Forrest
Alberta Agriculture
Edmonton, Alberta

W.B. Reed
University of Saskatchewan
Saskatoon, Saskatchewan

T.L. Pringle
Manitoba Department of Agriculture
Winnipeg, Manitoba

J. Huber
Raymore, Saskatchewan

B. Nicholson
Shoal Lake, Manitoba

M. Westby
Watrous, Saskatchewan

L.R. Warden
Regina, Saskatchewan

SECRETARY
R.L. Capstick, Director
Prairie Agricultural Machinery
Institute
Humboldt, Saskatchewan

PRAIRIE AGRICULTURAL MACHINERY INSTITUTE

LETTER OF TRANSMITTAL

Regina, Saskatchewan
March 1987

His Honour F.W. Johnson, Q.C.
Lieutenant Governor
Province of Saskatchewan

May It Please Your Honour:

Pursuant to Section 19(1) and (2) of the Prairie Agricultural Machinery Institute Act, R.S.S. 1978. I respectfully submit, for your consideration, the Annual report of the Prairie Agricultural Machinery Institute for the fiscal year ending March 31, 1987.

Your obedient servant,

Grant Devine
Premier and Minister of Agriculture
Province of Saskatchewan

LETTER OF TRANSMITTAL

Humboldt, Saskatchewan
March 1987

HONOURABLE GRANT DEVINE
Premier and Minister of Agriculture
Province of Saskatchewan

HONOURABLE PETER ELZINGA
Minister of Agriculture
Province of Alberta

HONOURABLE BILL URUSKI
Minister of Agriculture
Province of Manitoba

Sirs:

It is my honour to present the Annual Report and audited financial statements of the Prairie Agricultural Machinery Institute for the fiscal year ending March 31, 1987.

Respectfully submitted,

G. Nystuen, Chairman
Prairie Agricultural
Machinery Institute Council

Humboldt, Saskatchewan
March, 1987

Mr. G. Nystuen, Chairman
Prairie Agricultural Machinery
Institute
Spalding, Saskatchewan

Dear Sir:

It is my honour to submit the Thirteenth Annual Report of the Prairie Agricultural Machinery Institute for the year ending March 31, 1987.

During the year, several changes have taken place in the Institute's Management staff, including the appointment of Rick Atkins as Station Manager of the Lethbridge Station and my assumption of the Director's position in December. In addition, Glen Frehlich has tendered his resignation to return to the family farm, so that a search has begun for a new Manager for the Humboldt Station as well.

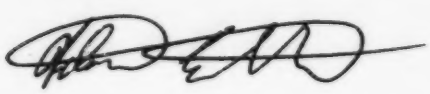
Despite all of these changes, the Institute has had a very successful year in terms of its programs. Over fifty pieces of equipment were evaluated with reports distributed to subscribers and made available to the agricultural community. Development contracts continue to be a priority with 35 projects completed and 13 ongoing at year end. Under this program the Institute has engaged in contracts with 44 different manufacturers and agencies during the year.

In addition, the Humboldt Station alone has logged over 13,500 direct contacts with farmers, manufacturers, research agencies and members of the general public. These contracts have been made through telephone or personal enquiries, by letter or by other encounters with the public. Although no figures were logged by the other stations, their numbers would greatly swell the total.

A new Prototype Evaluation Program was unveiled this year. This program was established to provide evaluations of new products as they are introduced to the market and was one of the main recommendations of the Touche Ross Study done in 1984. Although it is too early to draw conclusions, it appears as if the program will be well received as many sectors of the industry have voiced their support.

Sincere appreciation is expressed to farmers, manufacturers, universities, council members and department of agriculture personnel for their kind assistance and cooperation throughout the year and a special thanks is extended to the dedicated staff of the Institute.

Respectfully submitted,

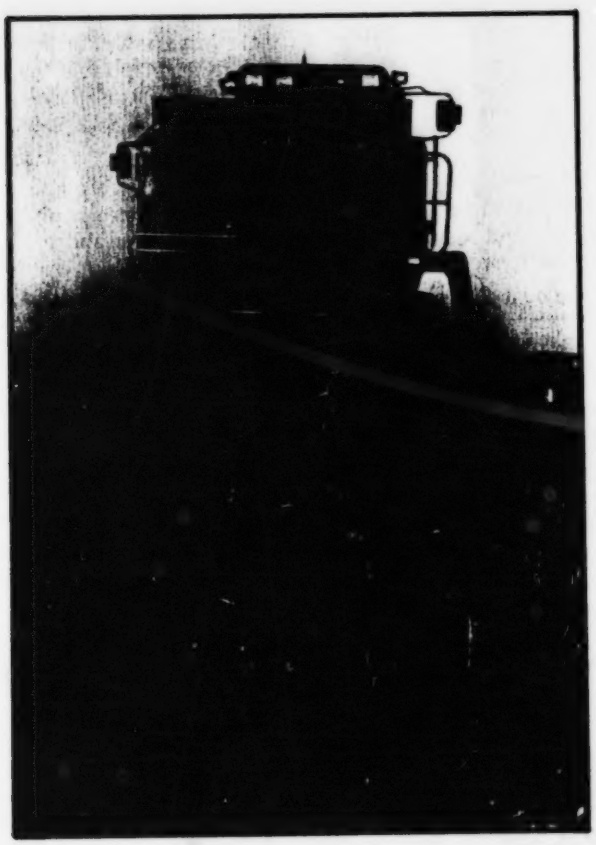


R.L. Capstick
Director

PROGRAMS AND OBJECTIVES

The general terms of reference for the Institute are provided in The Prairie Agricultural Machinery Institute Act which was passed by the Saskatchewan Legislature in 1974. Under this act, an agreement between the Ministers of Agriculture for Saskatchewan, Alberta and Manitoba provides for the Institute to be supported and operated as a co-operative venture of these provinces. The Prairie Agricultural Machinery Institute Council has the power to define programs and guide the activities of the Institute, within the terms of the act.

The purpose of the Institute is "to improve the design and aid in the selection and use of agricultural machinery in the prairie provinces." Three stations are located at Humboldt, Saskatchewan; Lethbridge, Alberta; and Portage la Prairie, Manitoba. Each carries out programs of special interest to farmers and manufacturers in its province.



PROGRAMS

Four distinct programs are defined and carried out by the Institute, as follows:

1. Development Program - aimed at assisting industry in developing and improving machines for prairie agriculture.
2. Evaluation Program - aimed at evaluating the performance of agricultural machinery in prairie conditions.
3. Research Program - aimed at ensuring that priority research projects, relative to agricultural machinery, are carried out to suit changing agricultural practices
4. Extension Program - aimed at providing farmers with information to assist in the intelligent purchase, and safe and efficient operation of agricultural machinery.

DEVELOPMENT PROGRAM

Under this program, assistance is provided to manufacturers in developing and improving machines to suit prairie needs. This may take the form of prototype or preproduction testing, design modification, or assistance in developing new machine concepts.

Some of the services available to manufacturers include the use of mobile field laboratories and specialized measuring equipment, durability testing of components or complete machine assemblies, experimental stress analysis, design of electronic control systems, standards compliance testing, sound level measurement, high speed photography, technical information searches and finite element analysis.

Every effort is made to assist prairie manufacturers who request immediate help to remedy urgent problems. Fee for service arrangements for development work are negotiated between the manufacturer and the Institute. A confidential report is provided to the manufacturers at the conclusion of each project.

EVALUATION PROGRAM

The Institute carries out functional evaluations of agricultural machines offered for sale on the prairies to determine performance characteristics, workrates, power requirements, safety aspects and general suitability for prairie agriculture.

Machines are selected for test based on a priority list established on the basis of importance to general prairie agriculture, uniqueness of design, and frequency of requests for information.

Laboratory and field tests are combined to accurately appraise performance under typical conditions encountered throughout the prairie provinces. Results are published in reports circulated to subscribers and made available to the public.

During the year, the Institute introduced a new Prototype Evaluation Program to conduct evaluations of newly developed machines before they are made available for general sale. Performance problems, if encountered, may be corrected by the manufacturer and the unit re-evaluated provided the manufacturer agrees to pay for this retest. The Institute's report, which will only be published when the unit is marketed will reflect only the finalized design, thereby eliminating the negative publicity of an uncomplimentary report.

RESEARCH PROGRAM

The Institute conducts selected timely research projects on machinery related subjects, usually in co-operation with universities, research institutions, test agencies and interested manufacturers. These projects for modifying cultural practices, developing mechanization to suit new crops, developing evaluation procedures and developing safety performance standards.

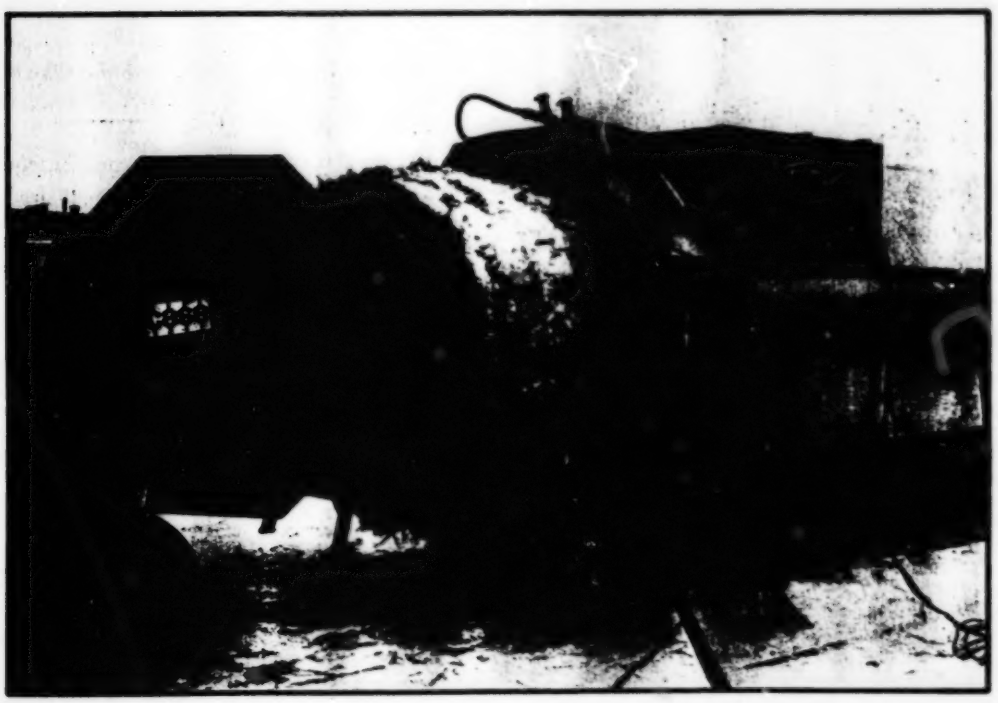
EXTENSION PROGRAM

Extension involves the dissemination of information obtained through other programs, to farmers, manufacturers, extension agencies and other interested groups and individuals.

The main extension vehicles are evaluation reports and "Gleanings" published and distributed to the public by the Institute. "Machinery Institute News" is circulated to extension agencies and others, to keep them informed on PAMI activities. Staff are also involved in short courses, meetings, tours, radio and television interviews, news releases, trade fairs and have membership on many external committees.

The extension program also involves preparation of movie and slide presentations on programs and individual projects for use by Institute and other extension agency personnel. Exhibits are also prepared for use at various functions.

Selected extension projects involving assembly and publication of information from various sources, are carried out as indicated by extension activities and information requests.



PROGRESS DURING 1986-87

ACTIVITIES AT HUMBOLDT STATION

- G.E. Frehlich, Station Manager

EVALUATION PROGRAM

Harvesting equipment continues to be high priority, as evaluation reports were completed on two combines and seven natural air drying systems. In addition, an evaluation report on a combine chaffer sieve was in progress.

Several machines have been finalized for testing in the 1987-88 fiscal year. Harvesting equipment will again be a priority. Included in the evaluations will be two combines, two windrowers, six natural air drying systems, and one cultivator. One other cultivator is being considered for the test season. The reports are scheduled to be mailed out to the subscribers next year before the season of use.

DEVELOPMENT PROGRAM

In 1986-87, the Humboldt Station completed 23 development projects for a total revenue of $111,000.00. Altogether, 24 projects were initiated for 20 different manufacturers. In addition, Humboldt engineers gave technical advice to 10 other manufacturers on the development of new products.

Many projects involved harvesting equipment, including tests on prototype natural air drying systems for five manufacturers, evaluation of a prototype straight cut header, tests on a straw spreader, and tests on a combine shoe. The shank assembly characteristics and durability testers continued to be busy. Prototype shank assemblies were tested for four manufacturers. Also, two Rollover Protective Structure cabs were tested for standard compliance. In cooperation with the Ontario Technology Centre, an interesting project was conducted on a non-electrically heated stock watering bowl to verify a thermodynamic finite element computer simulation. Capacity of a belt conveyor was determined, and the effect on inlet configuration on auger capacity was also determined.

Manufacturer's response to PAMI's development program was again excellent. They acknowledge the benefits of being able to contract an agency with such useful expertise and facilities within the prairies.

EXTENSION PROGRAM

With the accumulating expertise and test results, the usefulness and demand for extension continues to increase. Over the past year, PAMI's staff in Humboldt have been in direct contact with over 13,500 farmers. In coordination with S.D.A. Ag Reps, 22 clinics on planting equipment, combines, and grain drying were conducted throughout the province. PAMI was also represented at five trade shows, including Mexabition, Agribition, and the Western Canada Farm Progress Show. Two new promotional displays, along with promotional materials, were prepared and used in these shows and clinics.

Twenty-nine newspaper articles were sent to the media on timely farm machinery topics. Nineteen TV interviews and 17 radio interviews were conducted.

A video production on combining equipment was produced and made available to the public, agriculture extension people, and the media. Demand for this "hands-on" video has been overwhelming.

During the year, PAMI staff were requested as guest speakers at ratepayer meetings and technical conferences throughout Saskatchewan.

Altogether, they attended 20 events. Also, PAMI staff continued to maintain their presence in technical societies. A technical paper on "Combination Drying of Wheat on the Prairies" was represented at the CSAE meeting in Saskatoon.

Humboldt staff also conducted over 50 tours for farmers, education, government, and professional groups from Saskatchewan, Manitoba, and Alberta and as far away as China. The tours are very popular, and very useful, in showing the public the work being done at PAMI. PAMI staff are always ready to answer questions and respond to requests from the public. During the wet fall of 1986, dryer project staff were swamped with questions on grain drying equipment and procedures. In addition, questions were received throughout the year on combines, windrowers, seeding and fertilizing equipment, tractors, and tillage equipment.

RESEARCH PROGRAM

Field work was completed on a highly relevant drying research program to determine the "Effects of Using a Burner When Natural Air Drying". This project was funded by the Agriculture Development Fund of Saskatchewan Agriculture and the report has been submitted on its findings.

A report was also completed on "Combination Drying of Wheat in the Prairie Provinces". It was submitted to Agriculture Canada who provided funding for this research project under the ERDAF program. The report on the "Effects of MOG/G Ratio on Combine Capacity" is also being finalized and will be submitted to Agriculture Canada who funded that project.

A project was initiated to investigate the effects of harvesting methods and drying procedures on crops that contain a large amount of green kernels. Although further research is needed in future years, interim results were quickly provided and distributed to farmers last fall through the media.

Research was also conducted to add information to the cultivator evaluation reports, to accommodate different row spacings and tillage tools. This was in response to the extra requirements on cultivators as they become more and more adaptable, since most have to serve dual functions of tillage and seeding machines.

ACTIVITIES AT LETHBRIDGE STATION

- R. P. Atkins, Station Manager

EVALUATION PROGRAM

The Lethbridge Station completed one of its busiest test seasons ever during 1986-87. Evaluations were completed on two sprayers, thirteen ventilation and aeration fans, one air seeder, one air drill, two sprayer markers, a grain drill, a chemical injector, one blade cultivator, one chisel plow, and a seed brake attachment for air seeders. There are presently several prototype evaluations in progress including three air seeders, three seeding and banding assemblies and one sprayer marker system. New evaluation projects initiated during the year include three heavy duty cultivators, one air seeder, and one harrow-packer drawbar. Work was also conducted on a shrouded sprayer boom.

DEVELOPMENT PROGRAM

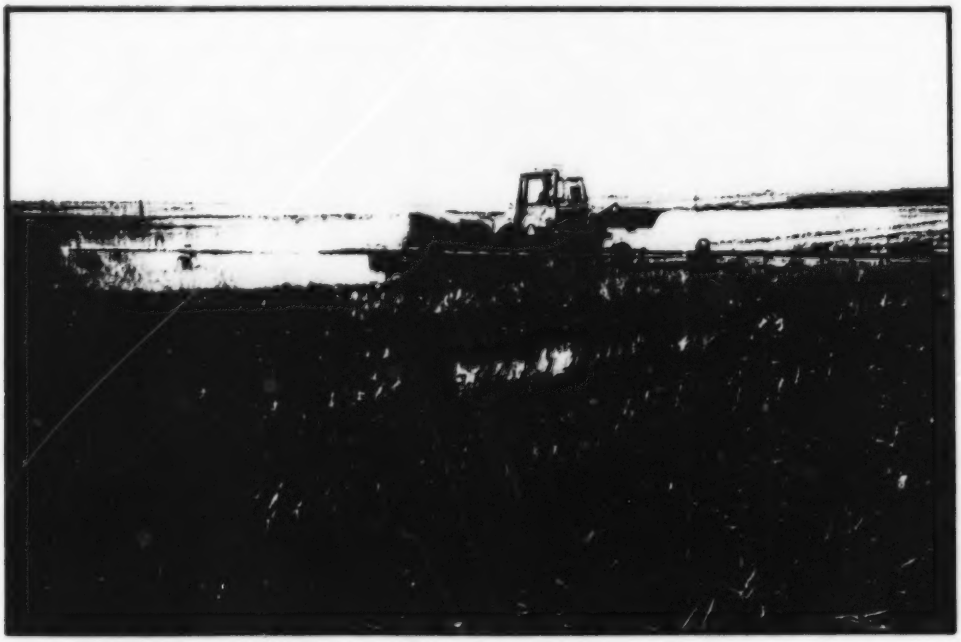
An increased emphasis on development projects has resulted in an increase in demand from manufacturers for assistance. Some of the projects completed during 1986-87 included draft comparisons on a blade cultivator, a sprayer chemical injector, a granular applicator, deep banding attachments, an air seeder, and more draft tests on various seeders in conjunction with the Agriculture Canada Research Station. Fifteen new development projects were initiated including another chemical injection system, a sprayer with a chemical injector, air seeder calibration, several fan related projects, a pneumatic conveyor, and continued seeder draft testing with Canada Agriculture.

EXTENSION ACTIVITIES

A very busy extension season was highlighted this winter by another series of "PAMI MACHINERY DAYS" held at ten different locations around the Province. A total of 715 farmers attended the meetings. Lethbridge Station staff were aided by specialists from Alberta Agriculture and also from the Humboldt Station. Presentations included day-long seminars on combines, seeding equipment, aeration and drying equipment, and sprayers. Requests for further Machinery Days have ensured that these direct to the farmer extension meetings will continue. Presentations were made by PAMI extension staff at twenty other seminars and producer meetings throughout the year. In total, approximately 1500 producers participated in PAMI seminars this year.

Attendance at trade shows and conventions included such events as the World Plowing Match at Olds, the Peace Country Classic in Grande Prairie, Red Deer's Agri-Trade Show, and the PIMA convention in Calgary. In all, eleven such events were included with an estimated exposure of more than 200,000 people.

Twelve different tour groups visited the Lethbridge Station during the year from places such as China, USA, and several universities and colleges. Several radio interviews and TV shows were taped and aired, and newpaper articles were numerous as well.



ACTIVITIES AT THE PORTAGE LA PRAIRIE STATION

- G. M. Omichinski, Station Manager

EVALUATION PROGRAM

The Portage Station continued its involvement with evaluation projects of haying equipment and zero-till drills. Evaluations were conducted on two round balers, two mower conditioners, three round bale transporters, one hay rake, and two models on zero-till drills. In addition, evaluation reports were completed and distributed to PAMI subscribers on a grain cleaner, zero-till drill intended for pastureland renovation and a front-end loader attachment.

DEVELOPMENT PROGRAM

Under its development program, the Portage Station conducted a variety of projects for a number of manufacturers.

In the area of vibration testing, the Portage Station undertook projects concerning field simulation of a prototype swather, field stress monitoring on a swather frame, durability test of a prototype combine header, prototype combine load and vibration measurements, steering component vibration analysis for a self-propelled swather.

Other development projects included a hydraulic pump performance verification, jack stand load test, fertilizer blender quality analysis, demonstation on zero-till drills, draft tests for tillage crop studies, and load ratings of hoist beams. In addition, a three year project was completed for Agriculture Canada concerning a study on the performance of three types of zero-till drills. This study involved functional assessment, durability evaluation, and agronomic performance comparisons in three crops. A major project initiated during the year concerned a demonstration of energy savings of zero-till over conventional till in a pasture renovation or rejuvenation application. The study also involves agronomic comparisons, conducted by the Manitoba Department of Agriculture.

In total, $50,000.00 was billed for development services throughout the year.

EXTENSION PROGRAM

The major extension events attended by Portage Station staff included the Farm Progress Show in Regina and annual weed fairs in Brandon and Winnipeg and the Agriculture Exhibition in Brandon.

PAMI staff participated in a number of "John Deere Days" sponsored by John Deere dealerships throughout the province, as well as field days organized by Hoechst.

Three combine clinics were hosted in differenct parts of the province, with the assistance of staff from the Humboldt test station. Presentations were made to agriculture diploma students in Winnipeg and Brandon, the annual "Ground Applicators School" for field sprayer operators, and a farmer meeting (Challenges of Production) in Dauphin. Some tours of PAMI facilities were conducted.

AUDITOR'S REPORT

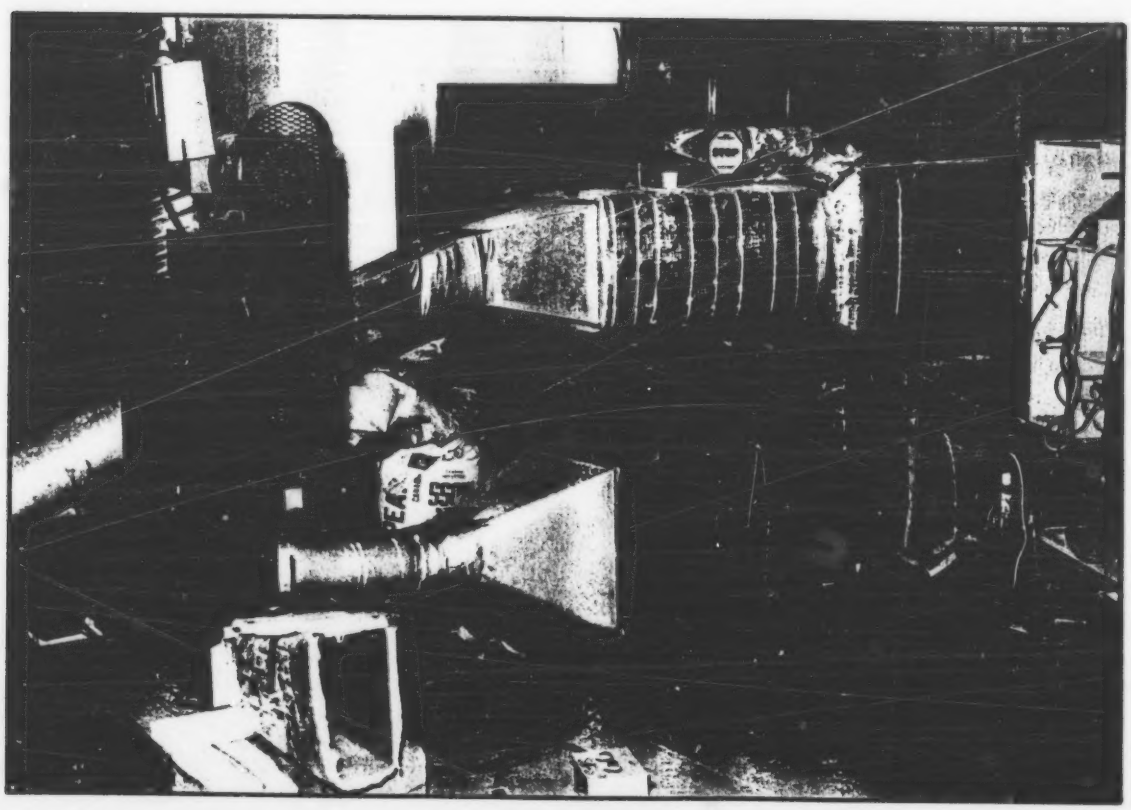
To the Members of the Legislative Assembly,
Province of Saskatchewan

I have examined the statement of financial position of the Prairie Agricultural Machinery Institute as at March 31, 1987, and the statement of revenue and expenditure and fund balance for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Prairie Agricultural Machinery Institute as at March 31, 1987, and the results of its operations and changes in financial position for the year then ended in accordance with the accounting principles disclosed in Note 1 to the financial statements applied on a basis consistent with that of the preceding year.

W. G. Lutz, F.C.A.
Provincial Auditor.

Regina, Saskatchewan
May 4, 1987



Statement 1

STATEMENT OF FINANCIAL POSITION

March 31, 1987

(with comparative figures at March 31, 1986)

ASSETS	1987	1986
Current		
Bank	$ 182,536	$ 152,054
Short term investments, at cost	691,775	646,537
Accounts receivable	78,773	124,794
Travel advances	7,040	5,250
Prepaid expenses	18,207	28,436
	978,331	957,071
Fixed: at cost		
Assets under capital leases	189,049	189,049
Buildings	2,678,302	2,676,608
Equipment - for evaluation	66,684	95,606
Equipment	1,712,004	1,742,394
Land and improvements	363,257	363,257
Furniture	288,230	292,918
Vehicles	271,574	253,358
Reference material	12,970	12,970
	5,582,070	5,626,160
	$6,560,401	$6,583,231

LIABILITIES AND FUND BALANCE	1987	1986
Current Liabilities:		
Accounts payable	$ 124,308	$ 100,883
Unearned subscription income	44,160	47,661
Project advances	7,760	12,850
Obligations under capital lease	42,003	41,960
	218,231	203,354
Non-Current Liabilities		
Unearned subscription revenue	72,602	79,036
Less current portion	44,160	47,661
	28,442	31,375
Obligations under capital lease (Note 3)	45,150	87,110
Less current portion	42,003	41,960
	3,147	45,150
Fund Balance:		
Fixed assets (Note 4)	5,536,920	5,539,050
Operating (Statement 2)	773,661	764,302
	6,310,581	6,303,352
	$6,560,401	$6,583,231

(See accompanying notes to the financial statement)

STATEMENT OF REVENUE AND EXPENDITURE AND FUND BALANCE

Statement 2

Year Ended March 31, 1987
(with comparative figures for the 1986 year)

	1987	1986
Revenue: (Note 1)		
Provincial grants		
- Saskatchewan	$1,057,120	$1,057,120
- Alberta	822,190	822,205
- Manitoba	469,820	469,830
	2,349,130	2,349,155
Fee for service	188,508	231,526
Investment income	92,942	97,159
Other income	38,970	38,648
Sale of fixed assets	13,044	26,115
Subscription income	70,052	68,363
Total revenue	2,752,646	2,810,966
Expenditure (Schedule 1)	2,743,287	2,824,812
Excess of revenue over expenditure	9,359	(13,846)
Fund balance, beginning of year	764,302	778,148
Fund balance, end of year	$ 773,661	$ 764,302

(See accompanying notes to the financial statements)

NOTES TO FINANCIAL STATEMENTS

March 31, 1987

1. Significant Accounting Policies

These financial statements have been prepared in accordance with accounting policies that are considered appropriate for organizations of this type. The significant accounting policies are as follows:

Fixed Assets

The acquisitions of fixed assets are financed primarily through grants received from the Provinces of Manitoba, Saskatchewan and Alberta, and are accounted for on a fund accounting basis. In the Statement of Revenue and Expenditure and Fund Balance (Statement 2), all grants are recorded as revenue and the purchase of fixed assets are recorded as an expense. Assets acquired and accounted for as capital leases are expensed as the related principal portion of the obligations under the capital leases are reduced. Accordingly, no provision has been made for depreciation of fixed assets. To maintain accountability for fixed assets, they are recorded as a balance sheet asset with a corrresponding entry to either the Fund Balance "Fixed Assets" or "Obligations Under Capital Leases". As the principal portion of the "Obligations Under Capital Leases" are reduced, the related amounts are credited to the Fund Balance "Fixed Assets".

Unearned Subscription Income

Subscription revenue for published reports is taken into an unearned subscription account as received and is amortized to income as the revenue is earned. The portion which relates to future years is shown as unearned subscription income in the Statement of Financial Position.

Fee for Service

Fee for service revenue on research contracts is recognized on the accrual basis to the extent that costs have been incurred but not billed.

Funding

In accordance with an agreement signed by the Provinces of Manitoba, Saskatchewan and Alberta, funding is received in the following proportions:

Manitoba	20%
Saskatchewan	45%
Alberta	35%

During the year Alberta has indicated they are not in a position to enter into a new agreement and will terminate their funding of the institute at the end of the 1987/88 fiscal year.

The Institute, in accordance with the authority included in O.C. 1800/79, follows the policy of retaining the excess of revenue over expenditure received in the year.

2. Incorporation

The Prairie Agricultural Machinery Institute was established as a body corporate under The Prairie Agricultural Machinery Institute Act, Chapter 2, 1973-74, Revised Statutes of Saskatchewan and is continued under Chapter P-21, Revised Statutes of Saskatchewan, 1978.

The purposes of the Institute include:

a) to test and appraise under actual or simulated working conditions, machinery sold or offered or intended for sale;

b) to undertake development work to improve and develop machinery for agricultural use;

c) to publish such reports, pamphlets and bulletins as are consistent with the intent of the Act.

3. Obligations Under Capital Leases

The following is a schedule of the minimum lease payments for several capital leases having implicit interest rates ranging from 13.5% to 16.6% which expire in 1988, together with the present of the total obligations under the capital leases:

March 31, 1988	$45,651
March 31, 1989	3,240
	48,891
Less: amount representing interest	3,741
	$45,150

4. Fund Balance, Fixed Assets

	1987
Fixed assets, March 31	$5,582,070
Less obligations under capital leases	(45,150)
Fund balance, fixed assets	$5,536,920

5. Government Assistance

During the 1987 fiscal year, the Institute received government assistance related to employment of students in the following amounts:

Government of Canada	$17,272
Province of Manitoba	1,513
Province of Saskatchewan	1,200
	$19,985

These amounts are included in other income in the statement of revenue and expenditure and fund balance.

SCHEDULE OF EXPENDITURE

SCHEDULE 1

Year Ended March 31, 1987

(with comparative figures for the 1986 year)

	Administration	Testing Equipment	Capital	1987 Total	1986 Total
Advertising and promotion	$ 5,906	$ 16,510	$ —	$ 22,416	$ 22,173
Bad debts	2,383	—	—	2,383	57
Building	—	—	1,695	1,695	4,120
Computer services	19,902	11,371	—	31,273	25,282
Contractual services	2,624	17,649	—	20,273	18,916
Employee benefits	13,465	150,580	—	164,045	172,699
Equipment - machinery to be evaluated	—	6,010	—	6,010	32,349
Equipment	—	—	61,760	61,760	81,425
Furniture and fixtures	—	—	1,295	1,295	2,531
Honoraria	8,810	—	—	8,810	3,375
Insurance, licenses and taxes	121	103,490	—	103,611	98,970
Interest expense - leases	—	10,906	—	10,906	17,067
Land improvements	—	—	—	—	1,050
Printing and binding	17,825	96,432	—	114,257	98,373
Professional and technical services	15,119	342	—	15,461	13,026
Reference material	5,213	4,038	—	9,251	11,115
Rent - building and equipment	—	78,772	—	78,772	82,175
- equipment to be evaluated	—	6,926	—	6,926	10,682
Repairs and maintenance - building and equipment	—	55,262	—	55,262	56,906
Salaries	133,133	1,406,695	—	1,539,828	1,643,861
Shop supplies	—	114,574	—	114,574	85,256
Stationary and office supplies	40,928	41,855	—	82,783	80,631
Telephone and telegraph	12,840	46,423	—	59,263	52,461
Travel and vehicle operations	35,768	93,206	—	128,974	133,492
Utilities	28	62,690	—	62,718	64,683
Vehicles	—	—	40,741	40,741	12,137
Electronics equipment	—	—	—	—	—
Shop equipment	—	—	—	—	—
Photo equipment	—	—	—	—	—
	$314,065	$2,323,731	$105,491	$2,743,287	$2,824,812